

Claims Listing

Claim 1. (Amended) A system for inspecting a specimen, comprising:

- a. a light energy source;
- b. a multiple element fly lens arrangement for receiving light energy from said light energy source;
- c. a lensing/imaging arrangement for receiving light energy from said multiple element fly lens arrangement and imparting said light energy to said specimen; and
- d. a pinhole mask for receiving light energy reflected from said specimen through said lensing arrangement and selectively passing said reflected light energy.

Claim 2. (Amended) The system of claim 1, wherein said light source comprises a multiple wavelength laser and said multiple element arrangement comprises a fly lens array.

Claim 3. (Amended) The system of claim 1, wherein said light source comprises an arc lamp and said multiple element arrangement comprises a pinhole array.

Claim 4. (Amended) The system of claim 1, wherein said light energy source comprises a laser and said system further comprises a beam expander which receives light energy from said laser and expands light energy toward said fly lens multiple element arrangement.

Claim 5. (Previously Presented) The system of claim 2, wherein said fly lens arrangement comprises a plurality of offset individual lenses.

Claim 6. (Previously Presented) The system of claim 5, wherein said fly lens arrangement is substantially aligned with respect to the pinhole mask.

Claim 7. (Previously Presented) The system of claim 1, wherein said lensing/imaging arrangement comprises:

- a. a first lens;
- b. a transmitter/reflector;
- c. an objective; and
- d. a tube lens.

Claim 8. (Previously Presented) The system of claim 1, further comprising a sensor for receiving light energy from said pinhole mask.

Claim 9. (Previously Presented) The system of claim 1, wherein said pinhole mask is mounted adjacent to a sensor.

Claim 10. (Previously Presented) The system of claim 8, further comprising a focusing lens, wherein said focusing lens receives light energy from said pinhole mask and focuses light energy onto said sensor.

Claim 11. (Previously Presented) The system of claim 1, wherein said light energy source comprises a multiple wavelength slit laser.

Claim 12. (Previously Presented) A specimen inspection system, comprising:

- a light energy source;
- a multiple element offset fly lens arrangement for receiving energy from said energy source and selectively passing the light energy received;
- a lensing arrangement for measuring and canceling topographical variations during inspection;
- a pinhole mask for filtering light energy received from said lensing arrangement; and
- a time delay and integration charge coupled device for receiving light energy from the pinhole mask.

Claim 13. (Previously Presented) The specimen inspection system of claim 12, wherein said lensing arrangement receives light energy from said multiple element arrangement and imparts light energy onto a specimen.

Claim 14. (Previously Presented) The specimen inspection system of claim 13, wherein said lensing arrangement further transmits light energy reflected from said specimen to said pinhole mask.

Claim 15. (Previously Presented) The specimen inspection system of claim 12, wherein said light energy source comprises a laser and said multiple element arrangement comprises a fly lens array.

Claim 16. (Amended) The specimen inspection system of claim 12, wherein said light energy source comprises an arc lamp and ~~said multiple element arrangement comprises a pinhole array.~~

Claim 17. (Previously Presented) The specimen inspection system of claim 12, wherein said light energy source comprises a laser and said system further comprises a beam expander which receives light energy from said laser and expands light energy toward said multiple element arrangement.

Claim 18. (Previously Presented) The specimen inspection system of claim 13, wherein said fly lens arrangement comprises a plurality of offset individual lenses.

Claim 19. (Previously Presented) The specimen inspection system of claim 15, wherein said fly lens array comprises a plurality of offset individual lenses.

Claim 20. (Previously Presented) The specimen inspection system of claim 12, wherein said lensing arrangement comprises:

- a. a first lens;
- b. a transmitter/reflector;

c. an objective; and

d. a tube lens.

Claim 21. (previously cancelled)

Claim 22. (Previously Presented) The specimen inspection system of claim 12, wherein said pinhole mask is mounted adjacent to a sensor.

Claim 23. (Previously Presented) The specimen inspection system of claim 21, further comprising a focusing lens, wherein said focusing lens receives light energy from said pinhole mask and focuses light energy onto said sensor.

Claim 24. (Previously Presented) A system for inspecting a semiconductor wafer specimen, comprising:

illumination means for generating light energy;

multiple element passing means for selectively filtering and passing energy received from said illumination means;

lensing means for imparting light energy onto said semiconductor wafer specimen;

masking means for further selectively filtering and passing energy received from said lensing means; and

a time delay integration charge coupled device for receiving light energy from said masking means;

wherein said multiple element passing means comprises an offset fly lens arrangement.

Claim 25. (Previously Presented) The system of claim 24, further comprising sensing means for detecting light passed from said masking means.

Claim 26. (Previously Presented) The system of claim 24, wherein said illumination means comprises a laser and said multiple element passing means comprises a fly lens array.

Claim 27. (Amended) The system of claim 24, wherein said illumination means comprises an arc lamp and said ~~multiple element passing~~ masking means comprises a pinhole array.

Claim 28. (Previously Presented) The system of claim 24, wherein said illumination means comprises a laser and said system further comprises a beam expander which receives light energy from said laser and expands light energy toward said multiple element passing means.

Claim 29. (Previously Presented) The system of claim 26, wherein said fly lens arrangement comprises a plurality of offset individual lenses.

Claim 30. (Previously Presented) The system of claim 30, wherein said fly lens arrangement is substantially aligned with respect to the pinhole mask.

Claim 31. (Previously Presented) The system of claim 24, wherein said lensing means comprises:

- a. a first lens;
- b. transmitter/reflector means;
- c. an objective; and
- d. a tube lens.

Claim 32. (Previously Presented) A method for inspecting a specimen, comprising:

generating light energy;

selectively filtering and passing energy received from said light energy generating using a multiple element offset fly lens arrangement;

imparting light energy from the multiple element arrangement onto said specimen;

further selectively filtering and passing energy reflected from said specimen; and

performing a time delay and integration sensing function on light energy received from said further selectively filtering and passing.

Claim 33. (Previously Presented) The method of claim 32, further comprising the step of sensing the energy received from said further selective filtering step.

Claims 34-50 (Previously Cancelled)